

What is claimed is:

1. An information processing system comprising:

a host computer; and

a storage device connected to said host computer and including a plurality of disk devices;

wherein:

said host computer includes:

means for storing information registering information about mapping relationships between said plurality of disk devices and logical storage regions;

means for retrieving retrieving from said information storing means information indicating a range of a destination disk device when data recorded on one disk device out of said plurality of disk devices is to be moved to another disk device; and

means for transferring transferring to said storage device information indicating a range in a disk device retrieved by said retrieving means and a range of data to be moved;

said storage device includes:

means for storing storing said information transferred by said transferring means;

means for reading data for said source out of said information stored in said storing means using said information indicating said range of data to be moved; and

means for copying copying to said destination disk device information indicating said region in said destination disk out of said information stored in said storing means.

2. An information processing device according to claim 1 wherein:

said storage device includes means for notifying notifying said host computer that said copying means has finished; and

said host computer includes means for updating mapping relations between disk devices and logical storage regions registered in said information storing means after receiving said notifying means.

3. An information processing device according to claim 2 wherein said host computer includes means for stopping access to data being transferred when said disk device is transferring data.

4. An information processing device according to claim 3 wherein:

said transferring means includes means for issuing instructions for writing said information to a predetermined disk device out of said plurality of disk devices; and
said storing device includes means for executing said reading means and said copying means when said information written by said issuing means is read by said storage device.

5. An information processing device according to claim 4 wherein said storage device includes:

means for recording accesses recording accesses when an access takes place for data copied by said copying means; and
means for matching data contents of source data and destination data according to contents recorded by said access recording means.

6. An information processing device connected to a storage device including a plurality of disk devices comprising:

means for storing information registering information about mapping relationships between said plurality of disk devices and logical storage regions;
means for retrieving retrieving from said information storing means information indicating a range of a destination disk device when data recorded on one disk device out of said plurality of disk devices is to be moved to another disk device;

means for transferring transferring to said storage device information indicating a range in said destination disk device retrieved by said retrieving means and a range of data to be moved; and

means for updating mapping information between said disk devices and said logical storage regions in said information storing means after moving of said data is finished.

7. An information processing device according to claim 6 wherein said retrieving means includes:

means for searching said information storing means for a physical storage region in said disk device that has not been assigned to a logical storage region; and

means for retrieving said physical storage region found by said searching means as a range in said destination disk device.

8. An information processing device according to claim 7 wherein

said transferring means issues write instructions to a predetermined disk device out of said disk devices in said storage device using said information as data.

9. A storage device connected to a host computer comprising:

a plurality of storage regions;

means for registering information about said plurality of storage regions not used by said host computer;

means for selecting one of said registered storage regions based on information from outside of said storage device; and

means for moving data to said selected storage region from another of said storage regions.

10. In an information processing device including a host computer and a storage device connected to said host computer and equipped with a plurality of disk devices,

a method for rearranging data in said plurality of disk devices comprising the steps of:

in said host computer,

determining a first disk device storing data to be rearranged;
retrieving information about a second disk device to be a destination for said
rearrangement; and
sending said determined information about said first disk device and said
retrieved information about said second disk device to said storage device;
in said storage device,
reading data from said first disk device based on said sent information about said
first disk device;
storing said data read from said first disk device based on said sent information
about said second disk device;
notifying said host computer of completion of storing when storing of said read
data is completed; and
updating a table in said host computer containing mapping relations between
logical and physical regions in said plurality of disk devices after said notification.